Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P821451

Luminaire Tested: **TT-D2-830-12VDC-RW-UPL**

Issue Date: 10/29/2020

Report Generated By 670245763

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Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P821451
	REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-2) AND
Test Lab:	INNOVATION CENTER
Issue Date:	10/29/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TT-D2-830-12VDC-RW-UPL
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
	3000K, 80 CRI LEDS AND RECTANGULAR DISTRIBUTION
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	4588.7 lumens
Efficiency:	N/A
Efficacy:	120.8 lumens/watt
Luminous Opening:	Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification:	Type IV - Short
BUG Rating:	B3 - U4 - G3

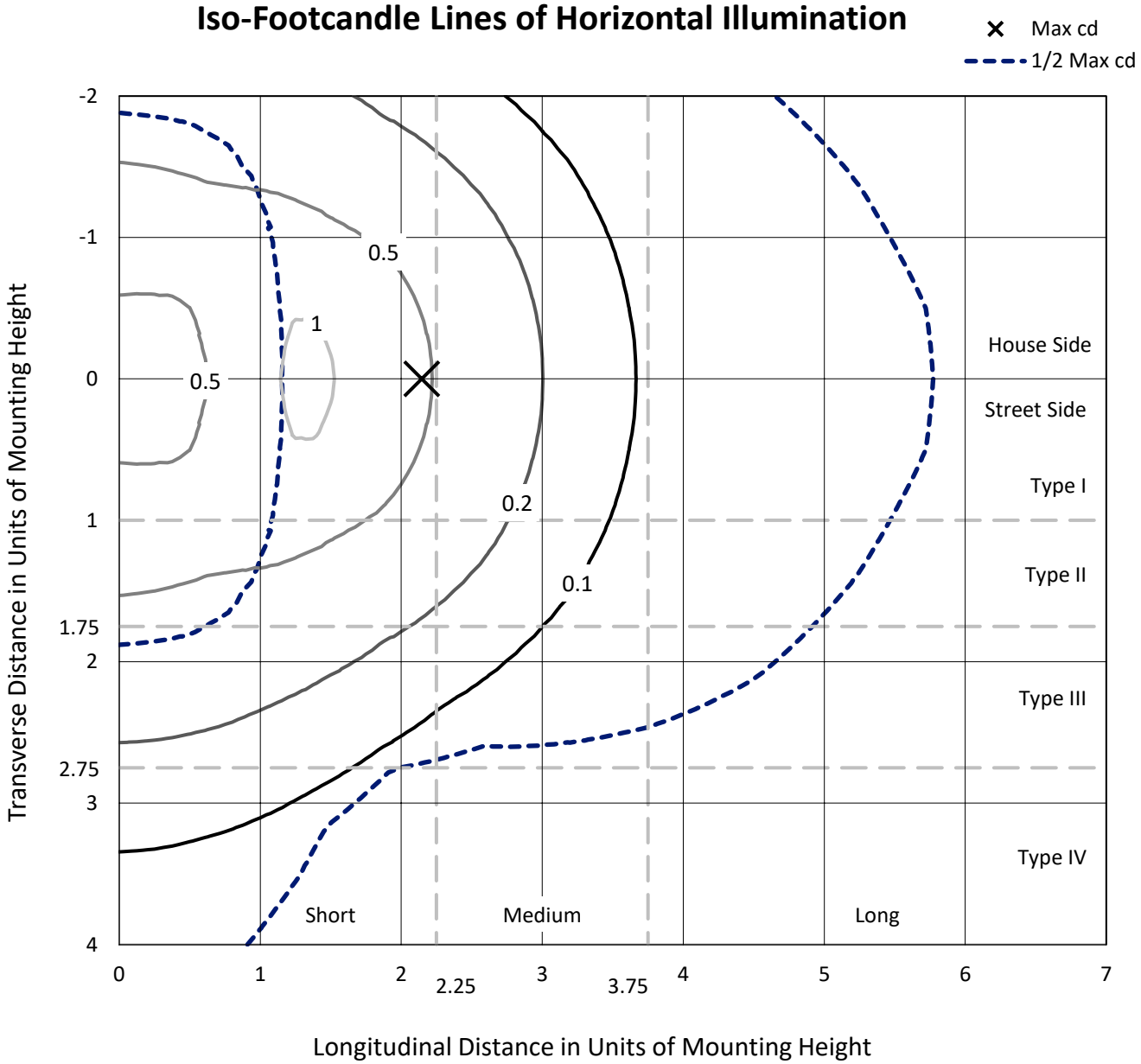
Input Watts (W):	38
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



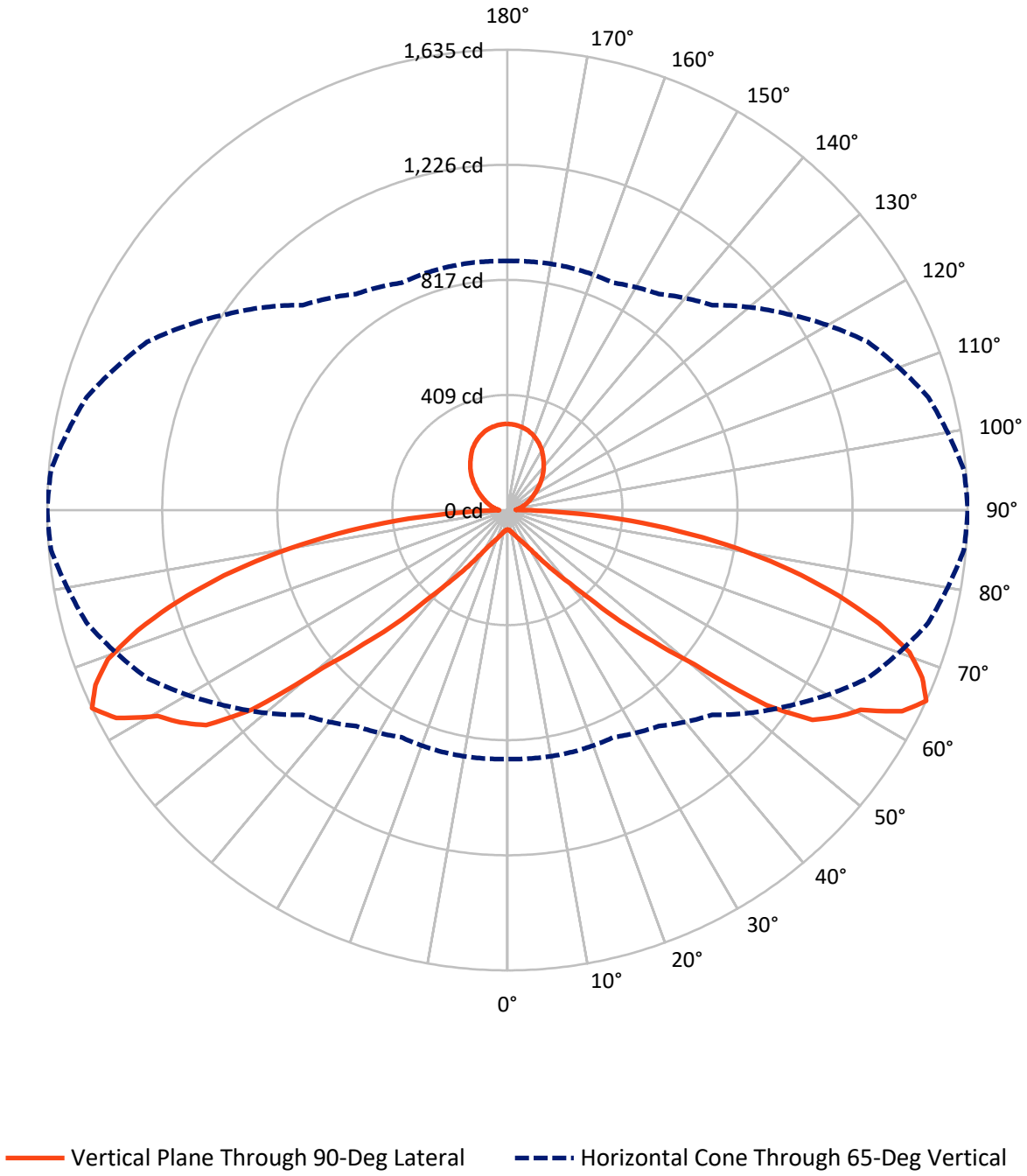
Based on 15 foot mounting height. Maximum calculated value = 1.1 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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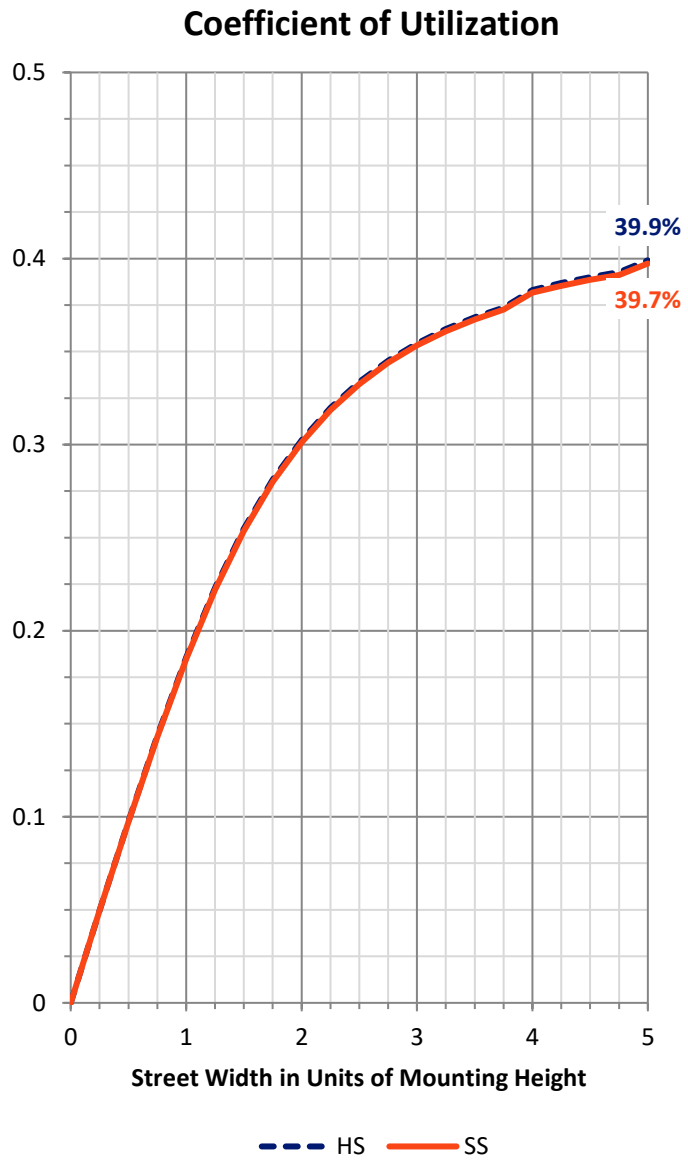
REPORT NUMBER: P821451
CATALOG NUMBER: TT-D2-830-12VDC-RW-UPL

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1878.5	415.9	2294.4
	% Fixture	40.9	9.1	50.0
Street Side	Lumens	1878.5	415.9	2294.4
	% Fixture	40.9	9.1	50.0
Total	Lumens	3757.0	831.7	4588.7
	% Fixture	81.9	18.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	7.2	0.2
10°-20°	26.8	0.6
20°-30°	61.8	1.3
30°-40°	139.8	3.0
40°-50°	340.6	7.4
50°-60°	765.9	16.7
60°-70°	1119.4	24.4
70°-80°	975.4	21.3
80°-90°	320.0	7.0
90°-100°	42.6	0.9
100°-110°	66.0	1.4
110°-120°	91.9	2.0
120°-130°	119.0	2.6
130°-140°	138.7	3.0
140°-150°	140.5	3.1
150°-160°	121.9	2.7
160°-170°	82.2	1.8
170°-180°	28.9	0.6
0°-90°	3757.0	81.9
0°-180°	4588.7	100.0



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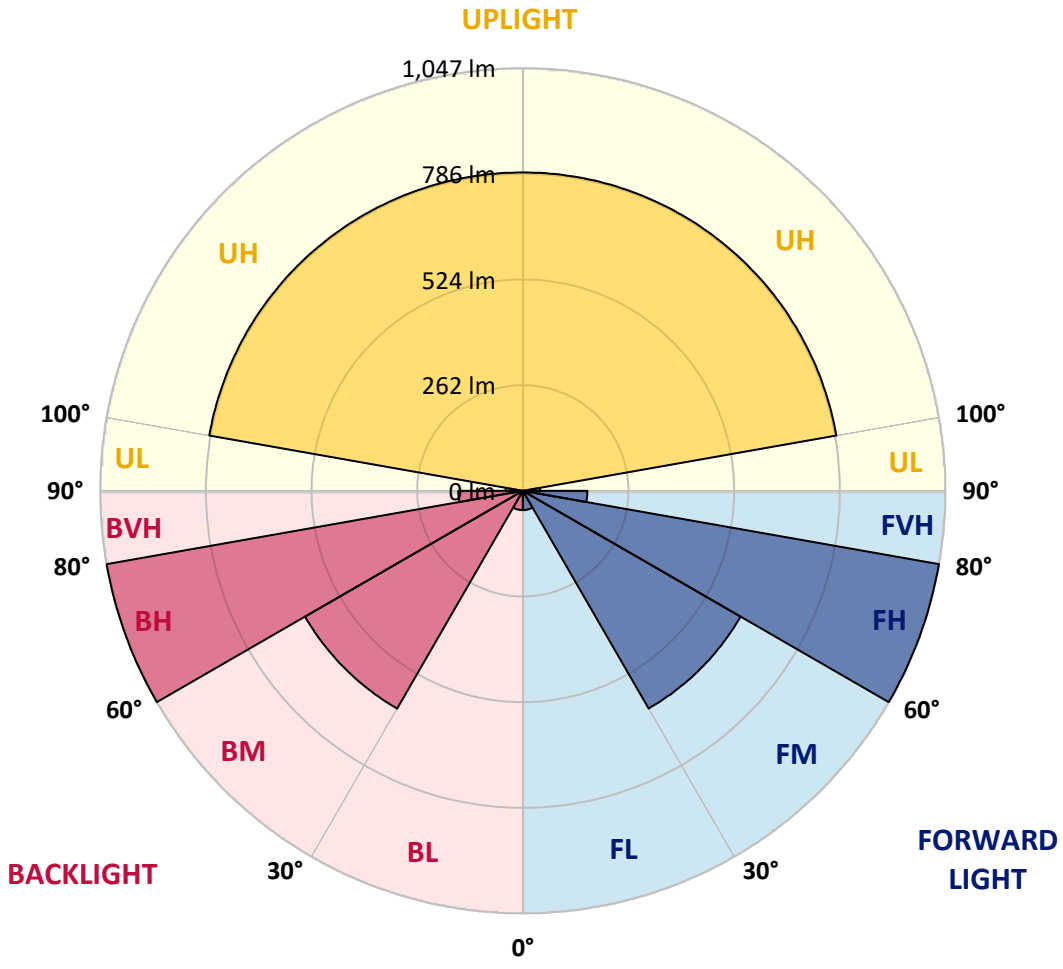
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	47.9	1.0			
FM	(30°-60°)	623.2	13.6			
FH	(60°-80°)	1047.4	22.8			G1/1800
FVH	(80°-90°)	160.0	3.5			G2/225
BL	(0°-30°)	47.9	1.0	B0/110		
BM	(30°-60°)	623.2	13.6	B1/1000		
BH	(60°-80°)	1047.4	22.8	B3/2500		G3/2500
BVH	(80°-90°)	160.0	3.5			G2/225
UL	(90°-100°)	42.6	0.9		U2/50	
UH	(100°-180°)	789.1	17.2		U4/1000	

BUG Rating: B3-U4-G3
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	68.6	68.6	68.6	68.6	68.6	68.6	68.6	68.6	68.6	68.6	68.6
2.5°	69.5	69.5	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3
5°	72.1	72.1	72.1	72.1	73.0	73.0	72.1	72.1	72.1	72.1	72.1
7.5°	76.6	75.7	76.6	76.6	76.6	75.7	75.7	75.7	74.8	74.8	74.8
10°	81.0	81.0	81.9	81.0	81.0	80.1	80.1	80.1	79.3	79.3	79.3
12.5°	87.3	87.3	87.3	87.3	86.4	86.4	85.5	84.6	83.7	83.7	83.7
15°	95.3	94.4	94.4	93.5	92.6	91.7	90.8	90.8	89.9	89.9	89.9
17.5°	103.3	103.3	102.4	101.5	99.7	98.8	98.8	98.0	97.1	97.1	97.1
20°	113.1	113.1	112.2	110.4	108.6	107.7	106.9	106.9	106.0	106.0	106.0
22.5°	124.7	123.8	122.0	120.2	118.4	117.5	116.7	115.8	115.8	115.8	115.8
25°	137.1	136.2	135.4	132.7	130.0	129.1	127.3	127.3	126.4	127.3	127.3
27.5°	152.3	151.4	149.6	146.9	143.4	141.6	140.7	140.7	141.6	141.6	142.5
30°	171.0	169.2	167.4	163.9	160.3	157.6	157.6	158.5	161.2	163.0	163.0
32.5°	193.2	192.3	189.7	186.1	179.9	178.1	179.9	185.2	188.8	191.5	193.2
35°	219.1	218.2	214.6	208.4	203.9	203.0	208.4	217.3	228.9	232.4	234.2
37.5°	247.6	248.4	244.0	236.9	232.4	234.2	244.9	261.8	273.4	281.4	283.2
40°	283.2	285.0	279.6	271.6	267.1	274.3	291.2	310.8	331.3	341.1	343.7
42.5°	325.0	327.7	320.6	312.6	309.9	321.5	345.5	377.6	414.1	425.7	430.1
45°	376.7	378.5	369.6	362.4	360.6	381.1	422.1	475.5	533.4	560.1	564.6
47.5°	438.1	437.2	429.2	420.3	422.1	451.5	512.9	585.1	646.5	687.5	696.4
50°	508.5	504.0	497.8	487.1	498.7	541.4	618.9	706.2	809.5	846.0	862.0
52.5°	578.8	570.8	565.5	558.3	578.8	634.0	742.7	894.9	1050.8	1134.5	1151.4
55°	642.0	635.8	633.1	634.0	666.1	745.3	887.8	1082.8	1233.3	1302.8	1315.3
57.5°	704.4	700.8	698.1	703.5	754.2	857.5	1017.8	1200.4	1324.2	1375.8	1384.7
60°	763.2	766.7	764.9	781.0	842.4	946.6	1085.5	1265.4	1384.7	1431.9	1441.7
62.5°	828.2	830.8	830.8	848.6	898.5	990.2	1131.8	1342.0	1493.4	1562.8	1573.5
65°	884.3	886.0	889.6	890.5	936.8	1028.5	1213.7	1412.3	1547.7	1627.8	1634.9
67.5°	926.1	927.9	923.4	919.0	954.6	1037.4	1207.5	1403.4	1523.6	1584.2	1589.5
70°	959.9	951.9	939.5	917.2	928.8	991.1	1155.9	1332.2	1453.3	1507.6	1515.6
72.5°	964.4	957.3	918.1	868.2	854.0	908.3	1065.0	1223.5	1327.7	1379.4	1380.3
75°	937.7	919.0	854.0	779.2	752.5	804.1	938.6	1082.8	1166.5	1210.2	1214.6
77.5°	847.7	829.9	748.0	662.5	632.2	676.8	790.8	907.4	987.6	1030.3	1033.0
80°	688.3	682.1	607.3	529.0	492.4	518.3	618.0	709.7	774.7	825.5	829.9
82.5°	507.6	502.2	445.2	376.7	347.3	368.7	439.9	507.6	568.1	609.1	611.8
85°	317.0	306.3	270.7	222.6	203.0	217.3	264.5	309.9	364.2	396.3	398.0
87.5°	106.0	101.5	87.3	72.1	60.6	63.2	77.5	94.4	138.0	152.3	161.2
90°	30.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
92.5°	34.8	34.2	34.2	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.8
95°	39.4	39.4	39.4	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
97.5°	44.6	44.6	44.6	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2
100°	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8
102.5°	55.9	55.9	55.9	55.9	55.9	55.9	55.9	56.4	55.9	55.9	55.9
105°	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.9	62.0	62.0	62.0
107.5°	68.6	68.6	69.0	69.0	69.0	69.0	69.0	69.5	69.0	69.0	69.0
110°	75.1	75.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	83.1	83.1	84.0	84.0	84.0	84.0	84.6	84.6	84.0	84.0	*84.0*
115°	91.1	91.1	92.0	92.0	92.0	92.0	93.0	93.0	92.0	92.0	*92.0*
117.5°	100.5	100.5	101.0	101.4	101.4	101.4	102.4	102.4	101.4	101.4	*101.4*
120°	109.9	109.9	109.9	110.8	110.8	110.8	111.8	111.8	110.8	110.8	*110.8*
122.5°	120.7	120.7	121.2	121.6	121.6	121.6	122.6	122.6	122.1	122.1	*121.6*
125°	131.5	131.5	132.4	132.4	132.4	132.4	133.4	133.4	133.4	133.4	*132.4*
127.5°	143.2	143.2	144.2	144.2	144.2	144.2	145.1	145.1	145.1	145.1	*144.2*
130°	155.0	155.0	155.9	155.9	155.9	155.9	156.8	156.8	156.8	156.8	*155.9*
132.5°	167.2	167.2	167.6	167.6	167.6	168.1	168.6	168.6	168.6	168.6	*168.1*
135°	179.4	179.4	179.4	179.4	179.4	180.3	180.3	180.3	180.3	180.3	*180.3*
137.5°	191.2	190.6	191.2	190.6	191.2	191.6	191.6	191.6	191.6	191.6	*191.6*
140°	202.9	201.9	202.9	201.9	202.9	202.9	202.9	202.9	202.9	202.9	*202.9*
142.5°	213.7	213.2	213.7	212.7	213.7	213.7	213.7	213.7	213.7	213.7	*213.7*
145°	224.5	224.5	224.5	223.5	224.5	224.5	224.5	224.5	224.5	224.5	*224.5*
147.5°	235.8	235.3	235.8	234.8	235.8	235.8	235.8	235.8	235.8	235.8	*235.8*
150°	247.0	246.1	247.0	246.1	247.0	247.0	247.0	247.0	247.0	247.0	*247.0*
152.5°	256.0	255.5	256.4	255.5	256.0	256.0	256.4	256.0	256.0	256.0	*256.0*
155°	264.9	264.9	265.8	264.9	264.9	264.9	265.8	264.9	264.9	264.9	*264.9*
157.5°	272.4	272.4	273.3	272.4	272.4	272.4	273.3	272.4	272.4	272.4	*272.4*
160°	279.9	279.9	280.8	279.9	279.9	279.9	280.8	279.9	279.9	279.9	*279.9*
162.5°	286.0	286.0	286.9	286.0	286.0	286.0	286.9	286.0	286.0	286.0	*286.0*
165°	292.1	292.1	293.0	292.1	292.1	292.1	293.0	292.1	292.1	292.1	*292.1*
167.5°	295.8	295.8	296.8	295.8	295.8	295.8	296.8	295.8	295.8	295.8	*295.8*
170°	299.6	299.6	300.5	299.6	299.6	299.6	300.5	299.6	299.6	299.6	*299.6*
172.5°	302.0	302.0	302.8	302.0	302.4	302.0	302.8	302.0	302.0	302.0	*302.0*
175°	304.3	304.3	305.2	304.3	305.2	304.3	305.2	304.3	304.3	304.3	*304.3*
177.5°	305.2	305.2	305.7	305.2	305.7	305.2	305.7	305.2	305.2	305.2	*305.2*
180°	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	*306.2*

(END OF REPORT)